

### REMARKS

Favorable reconsideration of this application is respectfully requested.

The specification is amended by the present response to include suggested headings.

Claims 16-42 are pending in this application. Claims 31-42 are added by the present response. Claims 16-30 were rejected under 35 U.S.C. § 112, first paragraph. Claims 16-30 were rejected under 35 U.S.C. § 112, second paragraph. Claims 16-26 and 30 were rejected under 35 U.S.C. § 112, second paragraph. Claims 27-29 were rejected under 35 U.S.C. § 112, second paragraph. Claims 16 and 21-30 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. patent 5,311,540 to Pocholle et al. (herein "Pocholle '540"). Claims 17-20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Pocholle '540.

Addressing now the rejection of claims 16-30 under 35 U.S.C. § 112, first paragraph, noted in paragraph 2 of the Office Action, that rejection is traversed by the present response.

The above-noted rejection is based on the position that the specification does not clearly indicate how one of ordinary skill in the art would go about choosing "at least one of a dimension and a distribution of the dopants".

In response to the above-noted rejection it is noted that the specification clearly describes an example of an embodiment of the present invention such as in Figure 2 in which as active lasing medium 3 includes a doped zone 8. The specification also clearly describes ways to determine the geometry and the dimensions of the non-uniformly doped zones and/or the distribution of the dopants in the steps noted at page 7, line 25, to page 10, line 8.

Applicants respectfully submit that such disclosures are clear to those of ordinary skill in the art as to how to choose the specific dimensions and distribution of dopants in such a doped zone 8. In such ways, each of claims 16-30 is believed to be in full compliance with all the requirements under 35 U.S.C. § 112, first paragraph.

Addressing now the rejection of claims 16-30 under 35 U.S.C. § 112, second paragraph, noted in paragraphs 4 and 5 of the Office Action, that rejection is also traversed by the present response. Specifically, each of the claims is amended by the present response to only recite an active lasing medium, a pumping means, and a pumping beam. Since the claims are written as “comprises” claims, the claims still encompass devices with multiple active lasing mediums, multiple pumping means, and multiple pumping beams, but for simplicity the claims are amended as noted above. However, for the reasons noted above the claims amendments are not believed to narrow the claims in any aspect.

The claims are also amended in general to clarify language therein.

Addressing now the rejection of claims 27-29 under 35 U.S.C. § 112, second paragraph, noted in paragraph 6 of the Office Action, that rejection is traversed by the present response. Claim 27 is amended by the present response to clarify the operation therein by further reciting a step of “assembling the one or more pieces to obtain an active medium...”. That claim amendment is believed to recite all necessary steps for the method of manufacturing an active medium recited in claims 27-29.

Addressing now the rejection of claims 16 and 21-30 under 35 U.S.C. § 102(b) as anticipated by Pocholle ‘540 and the rejection of claims 17-20 under 35 U.S.C. § 103(a) as unpatentable over Pocholle ‘540, those rejections are traversed by the present response.

It is respectfully submitted that the outstanding rejection has not fully considered all of the positively recited claimed features. Specifically, the claims recites as a positive element “one or more non-homogeneously doped zones formed in the active lasing medium”. Such a feature has not been addressed in the outstanding Office Action.

The outstanding rejection indicates that Pocholle ‘540 discloses an active lasing medium 12. However, it is clear that Pocholle ‘540 does not disclose the use of a “non-

homogeneously doped zone formed in the active lasing medium". It is also noted that the outstanding rejection has not indicated where or how such a feature is taught in Pocholle.

It is also noted that independent claim 16 is amended by the present response to clarify the language therein to make it more clear that such "one or more non-homogeneously doped zones" are positively recited elements.

Further, with respect to independent claims 16 and 27, Pocholle '540 also does not teach or suggest basing at least one of a dimension and a distribution of dopants in the doped zones based on a desired transverse mode of the optical cavity.

In such ways, each of the above-noted claims is believed to clearly distinguish over the applied art.

The present response also sets forth new claims 31-42 for examination. New claims 31-42 are similar to respective claims 16-26 and 30 except that new claims 31-42 do not recite the limitation directed to further defining the dimension and the distribution of dopants in the doped zones. However, new independent claim 31 also recites as a positive element "one or more non-homogeneously doped zones formed in the active lasing medium". As noted above such a feature distinguishes over the applied art.

Thus, new independent claim 31, and new claims 32-42 dependent therefrom, also distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read 'Gregory J. Maier', written in black ink.

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